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**HEALTH TECHNOLOGY ASSESSMENT IN DEVELOPING COUNTRIES: WHAT IS THE STATE OF PLAY?**

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**OBJECTIVES:** Health Technology (HTA) groups play an important role in health care decision-making in the developed world. Previous studies have suggested that their impact is dependent on certain internal and external markers of capability. It is unclear if these markers are applicable to so-called 'developing countries'. **METHODS:** A total of 122 respondents in 20 middle-income countries were interviewed over a 9-month period in 2008. The sample comprised health economists (27%), medical practitioners (19%); health care decision makers with knowledge of pharmacoeconomics (26%), and technology suppliers (28%). Health economists were surveyed about their group's preferred methodology of analysis, sources, therapeutic areas of interest and end customers. Clinical and financial decision-makers were surveyed about their use of pharmacoeconomics in treatment and coverage decisions; relationships with stakeholders; and other decision criteria. Technology suppliers were surveyed about formal and informal interactions with decision makers and their pharmacoeconomic requirements. A metric with three weighted variables was created. The variable measured the technical sophistication of HTA groups according to a series of methodological markers; the second variable measured decision making transparency according to a series of process markers; additionally, a third variable measured external environmental factors impacting technology adoption. An adapted Boston Matrix was created from these three variables. HTA groups in the Matrix were classified as 'advanced'; 'intermediate'; and 'nascent'. **RESULTS:** Only 9% of the HTA groups surveyed qualified as 'advanced', and 23% of HTA groups qualified as 'nascent'. A majority (68%) qualified as 'intermediate', suggesting a relationship to decision making despite great diversity in their technical capabilities. Correlations between environmental factors and technical sophistication, but not process transparency, were observed. **CONCLUSIONS:** The technical sophistication of HTA groups varies widely in developing countries and is independent of conventional process and environmental markers. Further research is needed to establish the additional drivers of HTA development in each country.

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**RED BLOOD CELL TRANSFUSION PRACTICES IN VA INTENSIVE CARE UNITS: HOW DO THEY VARY FOR PATIENTS WITH HEART AND CHRONIC KIDNEY DISEASE?**Ding YY<sup>1</sup>, Berlowitz DR<sup>2</sup>, Kader B<sup>3</sup>, Christiansen CL<sup>2</sup>

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**OBJECTIVES:** Red blood cell (RBC) transfusions are commonly administered in the care of critically ill patients. However, it is less clear how transfusion practice varies with hemoglobin (Hgb) level and with presence of heart and chronic kidney disease. We sought to describe the frequency of RBC transfusions among critically ill patients, how it varies with Hgb level, and to identify other associated patient characteristics. **METHODS:** This was a retrospective observational study involving secondary analysis of administrative data of patients admitted to Veterans Affairs (VA) intensive care units (ICU) from 2001 to 2005. First ICU admissions of the year for unique patients were included. The outcome of interest was RBC transfusion during the first 30 days of ICU admission. Explanatory variables include demographic and admission-related information, Hgb level, co-morbid conditions, ICU admission diagnosis, and laboratory test results. Logistic regression modeling quantified associations between these variables and transfusion. **RESULTS:** The data of 259,281 admissions were analyzed. Overall incidence of RBC transfusion was 12.5%, varying from 0.6% for Hgb above 12 g/dL, to 68.0% for Hgb below 5 g/dL. Increased age (OR 1.05, 95%CI 1.03–1.06 every 10 years), male gender (OR 1.19, 95%CI 1.08–1.30), admission for acute myocardial infarction (AMI) (OR 1.28, 95%CI 1.21–1.36), and co-morbid heart disease (OR 1.05, 95%CI 1.02–1.09) were independently associated with transfusion, but chronic kidney disease was not. Significant interactions between Hgb level and 3 admission diagnoses (AMI, angina, and congestive heart failure) resulted in even higher likelihood of transfusion among patients admitted for these conditions and had lower Hgb levels. **CONCLUSIONS:** Independent of Hgb level, ICU patients admitted for AMI, angina or congestive heart failure had higher likelihood of RBC transfusion, with this likelihood increasing even further among those with lower Hgb levels. Further research is needed to determine how these practices influence outcomes.

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**PHYSICIAN KNOWLEDGE AND CONFIDENCE IN APPROPRIATE MEDICATION PRESCRIBING IN THE ELDERLY: A SURVEY STUDY IN PARMA, ITALY**Maio V<sup>1</sup>, Abouzaid S<sup>1</sup>, Negri G<sup>2</sup>, Donatini A<sup>3</sup>

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**OBJECTIVES:** To assess general practitioners' (GPs) confidence in and knowledge of appropriate medication prescribing in elderly patients. **METHODS:** A total of 155 GPs (51% of the total number of GPs convened by the Local Health Unit (LHU) of Parma for an educational session), were asked to complete anonymously a 21-item paper survey. Physician demographics were collected. Confidence in prescribing for the elderly was measured using a 5-point Likert scale. Knowledge of inappropriate medication use in the elderly was assessed using 7 clinical vignettes based on the 2003

Beers Criteria, and a score out of 7 was assigned depending on the number of correct responses. Topics tested included hypertension, osteoarthritis, arrhythmias, insomnia, and depression. Data regarding physician's perceived barriers to appropriate prescribing for elderly patients was collected. Descriptive analyses using Fisher's exact test and t-test were conducted as appropriate. **RESULTS:** All GPs completed the survey. Respondents were 76% male, had a mean age of 54 (SD  $\pm$  5.0), and mean years in practice of 22 (SD  $\pm$  8.3). Most physicians (88%) felt confident in their ability to prescribe appropriate medications for the elderly. Sixty-nine percent of physicians had never heard of the Beers Criteria for potentially inappropriate prescribing in the elderly. The mean score in the clinical vignettes was 4.6 (SD  $\pm$  1.3). Comparison of characteristics of lower score ( $\leq$ 3) respondents versus higher score ( $\geq$ 6) respondents revealed that the former have been in practice for a longer time ( $p < 0.005$ ). Perceived barriers to appropriate prescribing included potential drug interactions (79% of respondents) and the large number of medications a patient is already taking (75%). **CONCLUSIONS:** While the majority of GPs feel confident in their prescribing for elderly patients, there is room for improvement regarding their knowledge of appropriate prescribing. Educational strategies tailored to specific GPs' categories should be established to enhance knowledge in this area and improve quality of prescribing.

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**25 YEARS OF ECONOMIC EVALUATION IN MEXICO: A SYSTEMATIC REVIEW OF ARTICLES PUBLISHED IN THE ECONOMIC AND MEDICAL LITERATURE: 1984–2009**Mould-Quevedo J<sup>1</sup>, Contreras-Hernandez P<sup>2</sup>

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**OBJECTIVES:** To assess the state of the art of economic evaluations (EE) of health care programs researched in Mexico, regarding their methodological quality and current tendencies. **METHODS:** Systematic review of Mexican studies on EE in health, published in national and international journals from January 1984 (first Mexican article published) to January 2009. We searched multiple electronic databases (PubMed, Embase, Medigraphic, Imbiomed, Latinmed), hand-searched key journals and personally contacted investigators in January 2009. Two health economist reviewers independently assessed the relevance of retrieved articles, described the methods of included studies and extracted data that was summarized by consensus. Drummond's criteria were used: a) to classify between complete economic evaluation (CEE) or partial economic evaluation (PEE), and b) to assess the criteria quality of methodology. Publication characteristics analyses were conducted with descriptive and analytic statistics. Limitation: only published studies in journals were included (abstracts, book chapters or technical reports were excluded). **RESULTS:** A total of 101 studies matched inclusion criteria: 48.5% were CEE and 51.5% were PEE. Number of CEEs in Mexico increased significantly among 2005–2009 (14 studies), showing a 71.8% increase in all EE. A total of 73.3% of manuscripts were published in Mexican Journals and 81.6% corresponded to cost-effectiveness analyses. Articles covered emphasis on nephrology (9.0%) and infectology (8.4%). Regarding 2008–2009 methodology quality improvement in comparison to 2004 publications: 40.8% didn't mention study perspective (vs. 66.7% in 2004,  $p < 0.05$ ), 44.9% didn't report sensitivity analyses (vs. 66.7% in 2004,  $p < 0.05$ ), 30.0% didn't report discount rate when it was necessary (vs. 63.5% in 2004,  $p < 0.05$ ) and only 40.8% studies estimated an ICER (vs. 37.5% in 2004,  $p = 0.12$ ). During 1984–2009, only 28.6% of published studies reported probabilistic sensitivity analyses and 18.4% used a decision tree-model in the assessment (main economic model used). **CONCLUSIONS:** An increase in CEEs in Mexico with a small improvement on quality methodology during the last five-year period.

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**MEXICAN POSTER PRESENTATIONS AT ISPOR MEETINGS: A QUALITY AND TENDENCY ASSESSMENT 2003–2008**Mould-Quevedo J<sup>1</sup>, Contreras-Hernandez P<sup>2</sup>

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**OBJECTIVES:** To assess the state of the art of Mexican pharmacoeconomics (PE) and outcomes research (OR) poster presentations at International Society for Pharmacoeconomics and Outcomes Research (ISPOR) meetings, regarding methodological quality and current tendencies. **METHODS:** Systematic review of Mexican presentations on PE and OR at ISPOR Meetings from May 2003 (first Mexican poster presentation) to November 2008. We searched abstracts and poster presentations at Annual International Meetings, Annual European Congresses and Latin America Conferences. Two health economist reviewers assessed the relevance of retrieved abstracts, described the methods of included studies and extracted data that was summarized by consensus. Drummond's criteria were used: a) to classify between complete economic evaluation (CEE) or partial economic evaluation; and b) to assess the criteria quality of methodology. Abstracts characteristics analyses were conducted with descriptive and analytic statistics. **RESULTS:** A total of 116 abstracts matched inclusion criteria: 97 were PE (83.6%), 13 were OR (11.2%) and 6 were clinical trials results (5.2%). A total of 82.5% of PE abstracts were CEE. During the past two years presentations increased significantly (16 studies), showing an 88.9% growth. A total of 60.3% of studies were performed at the Social Security Mexican Institute (IMSS) and 70.1% of PE presentations corresponded to cost-effectiveness analyses. Posters covered a wide range of conditions, with emphasis on cardiovascular diseases (19.8%) and oncology (12.1%). Regarding quality of CEE studies: 27.4% didn't mention study perspective, 40.3% didn't report analyses, 39.1% didn't report discount rate when it was necessary (time horizon above 1-year) and only 52.6% studies estimated an ICER. A total of 69.0% of these studies had a pharmaceutical-industry sponsor, 34.5% were